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Reasons for Discontinuing Internet-Delivered Cognitive Behavioral Therapy-Based Treatment for Older Adults With Depression: Findings From a Qualitative Study

Tomas Getautas[1], Elena Lapinskaitė-Vvohlfahrt[1], Gerhard Andersson[2,3], Jonas Eimontas[1]

[1] *Department of Clinical Psychology, Institute of Psychology, Faculty of Philosophy, Vilnius University, Vilnius, Lithuania.* **[2]** *Department of Behavioural Sciences and Learning, Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden.* **[3]** *Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden.*

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Corresponding Author: Jonas Eimontas, Vilnius University, Faculty of Philosophy, Institute of Psychology, Department of Clinical Psychology, Universiteto str. 9, 01122 Vilnius, Lithuania. Phone number: +37052667615. E-mail: jonas.eimontas@fsf.vu.lt

Supplementary Materials: Materials [see Index of Supplementary Materials]

Abstract

Background: Online psychological interventions, particularly internet-based cognitive-behavioural therapy (CBT), have proven effective in treating mental health issues such as depression and anxiety. However, participants often drop out before completing these interventions, especially in the context of ICBT for older adults. Understanding the reasons for dropout can improve engagement and the overall effectiveness of online interventions.

Method: Thematic analysis was employed to examine reasons for dropout from an online CBT intervention for older adults (60+). Semi-structured interviews were conducted with 9 participants who dropped out of the program. Data was analysed using thematic analysis.

Results: Key themes underlying dropout included technical difficulties, perceived ineffectiveness, the program's rigid format, and symptom exacerbation. Participants also highlighted a lack of personalized support and dissatisfaction with the program's content. Broader engagement barriers emerged as well, such as limited digital literacy, frustration with the structure, and a mismatch between participants' expectations and the program's offerings.

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Conclusion: While online CBT can be an effective tool for older adults, factors like program rigidity, lack of personalization, and digital literacy challenges must be addressed to reduce dropout rates. Tailoring content and improving participant support are essential for enhancing engagement and ensuring the success of internet-based interventions for older adults.

Keywords

online intervention, CBT, older adults, dropout, thematic analysis, engagement, digital literacy

Highlights

- Internet CBT can help older adults with depression, yet they are underrepresented in research.
- Older adults who left internet CBT named environmental, personal, program and belief barriers.
- Barriers rarely acted alone. They reinforced each other, making dropout more likely.
- Flexibility, clear expectations and live contact may help retain older adults.

Delivering interventions via the internet is now an established format. Extensively utilized and analysed in research, internet interventions have been the subject of study for more than twenty years (Andersson et al., 2019; Andersson, 2024). While internet interventions vary, most programs and studies employ forms of cognitive-behavioural therapy (CBT), typically delivered via platforms that host the intervention and track progress. Materials are often provided in written, video, or audio formats, alongside "homework" assignments. Participants may interact with an assigned psychologist or, in self-help programs, access automated support resources (Andersson et al., 2019). Internet-based cognitive behavioural therapy (ICBT) has demonstrated efficacy in reducing symptoms across a broad spectrum of psychiatric, somatic, and mental health conditions, with success in diverse subpopulations such as older adults and students (Käll et al., 2024). A recent meta-analysis suggests that ICBT and face-to-face CBT do not significantly differ in dropout or attrition rates (Linardon et al., 2026). Consistent with this, prior studies suggest that ICBT is a viable alternative to face-to-face treatment for individuals with depression, anxiety, functional disorders, and eating disorders (Andersson et al., 2016; Hedman et al., 2012). Although some evidence suggests that therapist-guided ICBT yields superior outcomes (Karyotaki et al., 2021; Titov et al., 2016), unguided ICBT nevertheless shows substantial potential for achieving meaningful long-term benefits, particularly in settings with limited economic and workforce resources.

A crucial aspect of online/internet interventions that has been widely studied is participants' engagement. One of the most frequently analysed factors is what predicts or influences engagement. Beatty and Binnion's (2016) systematic review found that female gender, individuals with higher expectations for effectiveness, and those receiving psychologist support were factors resulting in more engagement. Other studies have

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examined engagement specifically in online interventions targeting mental health conditions. Wallert et al. (2018) in a study of an internet-based intervention for symptoms of depression and anxiety following myocardial infarction, reported higher engagement among women, particularly among participants whose fear of cardiac symptoms motivated program use. Research focusing on internet-based treatments for depression among adults has similarly highlighted the importance of therapist support. Doherty et al. (2012) emphasized psychologist support, noting that 36% of participants dropped out with it, compared to 74% in similar interventions without psychologist involvement. From participants' perspectives, Donkin and Glozier (2012) found that factors such as perceived benefits outweighing effort, a sense of obligation to the researchers, and the belief that participation could help others encouraged continued engagement. Thus, factors like gender, expectations, intervention format, perceived benefit, and commitment to the study all influence engagement, though their impact may vary across different interventions and populations.

The number of studies on the reasons for discontinuing participation in online interventions has been steadily rising. In nine studies included in a systematic review on internet interventions for anxiety and depression, participants were asked to specify their reasons for dropping out (Christensen et al., 2009). The identified reasons included lack of time, motivation, technical difficulties, depressive episodes or physical health issues, absence of live contact, preference for medication over the intervention, perceived lack of effectiveness, improvement in symptoms, and the program's workload. Later studies on dropout from online interventions for relaxation, anxiety treatment, and psychoeducation on bipolar disorder support these factors (Alfonsson et al., 2016; Johansson et al., 2015). These findings have been corroborated by more recent research. Nomeikaite et al. (2023) reported similar program-related and person-related reasons for discontinuation of therapist-supported ICBT among healthcare workers for stress recovery. Building on these earlier findings, Simon et al. (2025) identified both consistent factors and new barriers specific to ICBT for insomnia, including distractions from daily life, difficulties resuming after treatment breaks, the impersonal nature of the intervention, and insufficient e-coaching support. Meanwhile, meta-analysis findings on dropout in self-guided internet interventions for depression show that demographic factors like being male, having lower education, or being younger increase dropout risk (Karyotaki et al., 2015). More recent quantitative studies suggest that technical difficulties and personality traits like openness predict higher dropout rates in ICBT with support (Schmidt et al., 2019) and how quickly people complete the first module was one of the strongest early warning signs of dropout (Moshe et al., 2022). Similarly, Lawler et al. (2021) qualitative study showed that actual treatment experience and engagement matter more than demographic or technology factors, indicating that life stress and competing demands are the main reasons people drop out. Therapist-guided ICBT treatments have been associated with lower drop-out rates compared to the unguided format. The reasons for dropout are

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diverse. However, the most common factors across studies were lack of time, technical difficulties, perceived ineffectiveness, and lack of personal support.

Although there are a few studies specifically on ICBT for older adults, existing research indicates that it effectively reduces depressive symptoms, psychological distress, and improves daily functioning (Hobbs et al., 2018). ICBT is an attractive treatment option for older adults (Stanford & Just, 2025), and older individuals show better adherence compared with younger people (Karyotaki et al., 2015). However, significant barriers remain. Gould et al. (2024) found that older veterans experienced difficulties with self-directed home practice, including difficulty setting time aside, forgetfulness and competing demands. Similarly, treatment dropout in therapist-supported ICBT for depressed older adults was associated with older age and lower computer skills (Eimontas et al., 2025). Multiple factors contribute to these challenges: limited digital literacy and age-related cognitive changes, lack of reliable internet or technology access, stigma surrounding mental health treatment, discomfort with digital tools, and preference for face-to-face interactions (Andrews et al., 2019; Sander et al., 2016; Seifert et al., 2019). These barriers correlate negatively with both age and illness severity (Stanford & Just, 2025). Despite these findings, older adults tend to view internet interventions positively yet remain underrepresented in internet-intervention research (Stanford & Just, 2025). Understanding older adults' experiences and engagement with ICBT is therefore essential, particularly given that it remains an effective method for addressing depression in this population (Xiang et al., 2020). However, few studies have investigated the experiences of older adults who discontinue treatment. This is important because dropouts are hard to reach, since they already made the decision to stop participating and have less motivation to dedicate their time to the study. However, previous studies found that adding therapist support to the intervention improves completion of post-treatment assessments. An individual patient data meta-analysis found that older participants are less likely to drop out from ICBT for depression (Karyotaki et al., 2015). However, there are only a handful of studies of ICBT for depressed older adults and none of them identified the reasons for dropout. Thus, investigating the reasons in internet-based intervention programs is essential for identifying and mitigating barriers to participation, thereby optimizing the effectiveness, accessibility, and sustainability of online therapeutic approaches for older adults.

Method

Thematic analysis was employed in this study following the guidelines provided by Braun and Clarke (2006). This method was used to explore participants lived experiences and identify patterns in their responses without imposing predetermined theoretical frameworks. There are six phases of thematic analysis: 1) familiarising yourself with the data, 2) generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining

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and naming themes, and 6) producing the report. This approach groups and illustrates in detail the available data and allows interpretation of various aspects of the subject of the study. This allowed us to derive themes from the data itself, providing insight into how older adults actually experience internet-based interventions.

Participants and Intervention

All participants in this study were part of the larger study on the efficacy of an internet-delivered treatment for depressed 60+ year adults (Eimontas et al., 2021). Participants were self-referred and were recruited through traditional and social media, public health centres and non-governmental organisations. After completing the registration form and providing informed consent, participants filled in self-report questionnaires and those 84 who met inclusion criteria and did not meet exclusion criteria were randomly assigned to either 8 weeks of internet-delivered CBT or a waiting-list. The intervention was guided with scheduled messages from the program therapist and responses to enquiries on demand. The intervention consisted of modules of psychoeducation on depression and CBT, behavioral activation and other CBT typical modules all of whom had an exercise to be completed by the participants. More information on the intervention can be found in the study protocol paper of this RCT (Eimontas et al., 2021). The participants who dropped out during the course of the program were selected for this study. Dropouts were defined as those participants who were assigned to the treatment group and did not complete four or more of the final intervention modules out of eight or who formally informed that they would no longer participate in the program. In total, there were 13 such participants (12 women, one man). All participants were contacted by telephone to arrange an interview time. Two participants declined to participate in the interview and the other two could not be contacted. One woman who declined to participate stated that she had nothing to say because she had not participated due to problems with trying to join the program. Another woman stated that she declined to participate because the content of the program did not meet her expectations. The final sample for this study consisted of nine dropouts (eight women, one man). Agreeing participants were asked to find a private space for the time of the interview. The mean age of these participants was 71.44 years (SD = 4.72), and the mean duration of poor mental health was 17.89 months (SD = 18.42). Eight out of nine participants had completed tertiary education, seven out of nine lived in a metropolitan area, and two out of nine had a previous diagnosis of depression. Only participants who fulfilled diagnostic criteria for depression according to the Mini International Neuropsychiatric Interview (MINI; Version 5.0.0) during a telephone interview were deemed eligible for participation in the study. At baseline, the average score on the PHQ-9 was 12.01, and dropouts did not differ from completers on their baseline scores (Eimontas et al., 2025).

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Instruments and Study Design

The study used a semi-structured interview (Annex 1), which consisted of 13 questions, of which two were basic questions: "*Could you name the reasons why you stopped using the program?*" and "*What do you think should be different in order for you to fully participate in the program?*". The other questions aimed to find out how the participants found out about the program and decided to take part, what were their habits of using the program (what device did they use, where did they use it, what time of the day/week did they use it, what did they do when they were logged in), what was useful, what was harmful, what was missing, what would the participants suggest adding to the program, and whether they would use a similar web-based intervention in the future. The questions were pilot tested with graduate-level clinical psychology students involved as therapists in the intervention.

The interview was conducted remotely, with the call being made via Skype and recorded in OBS Studio. A total of nine interviews were carried out by the interviewer TG after treatment commenced in April of 2021. The interviews were conducted between one and three weeks after the intervention ended. The total duration of the interviews was 2 hours, 46 minutes and 14 seconds. TG (male), who was an undergraduate student in Psychology at the time of the interviews, had contacted the participants in advance to arrange the time for the interviews. TG was formally trained at the University to conduct semi-structured interviews. TG did not know the participants prior to the study. At the beginning of all interviews, the participants were informed about the purpose of the study: to better understand the reasons why they dropped out of the program. They were also informed that the interview would be recorded and their consent was obtained. The resulting recordings were transcribed using ATLAS.ti and the resulting texts were transferred into Microsoft Word documents. The resulting transcripts totalled approximately 27 pages or 73 268 characters. Additionally, the interviewer made field notes during and immediately after the interviews to record participant engagement, interview flow and any interruptions.

Data Analysis

An inductive thematic analysis approach was used to identify patterns directly from the interview data rather than fitting data into predetermined categories. The transcribed data was read several times, noting any ideas that emerged during the reading that might be useful during the coding process, in order to gain a better understanding of the material and to facilitate further work. This was followed by the generation of the initial codes. The resulting codes and their assigned quotes were read several times in order to merge overlapping codes. This was followed by a common theme search, which attempted to combine the codes into themes. This was done by writing out the codes on slips of paper and trying to group them under similar themes. The data was

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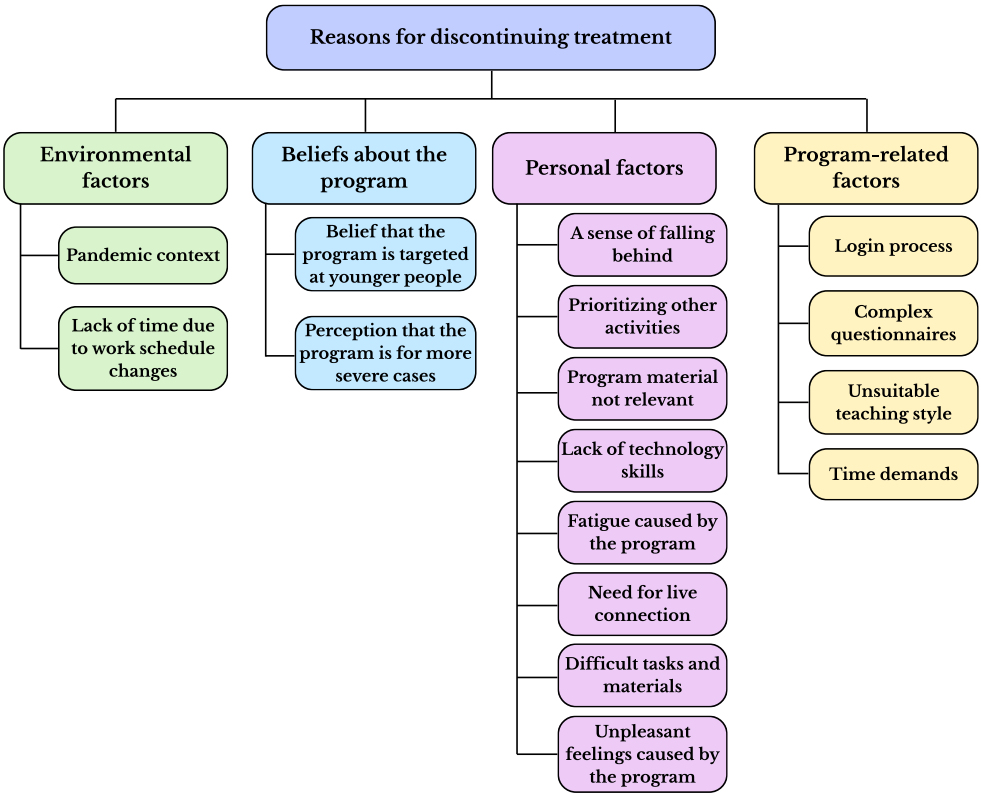
rated by two coders. TG, who conducted the interviews and was familiar with the data, performed the initial coding. ELV reviewed the coded interviews to check for consistency between coders. Disagreements were discussed and resolved collaboratively with JE. The research question guided which codes and themes to prioritize. This process identified four groups of codes, and each of these groups was subdivided into sub-themes. Finally, a map of themes and sub-themes was drawn up, where names were assigned to the main themes and sub-themes.

Results

A total of four themes on reasons for treatment discontinuation emerged from the interviews (Figure 1). We further present the themes and subthemes with quotes from the interviews and discuss these findings.

Figure 1

Themes and Subthemes for Reasons for Discontinuing Internet-Delivered Psychological Treatment for Depression



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Theme 1: Environmental Factors

Two participants described environmental barriers that contributed to disengagement from the intervention, relating to changes in work conditions and the broader pandemic context.

1.1 Lack of Time Due to Work Schedule Changes

Only one participant reported work-related barriers to engagement. Participant 6 (P6) enrolled in the program while on sick leave, anticipating greater availability once she returned to work. However, unanticipated changes to her schedule resulted in extended evening shifts, substantially reducing both her available time and energy for program activities. These changes made it difficult for her to maintain engagement with the intervention:

> "*Well, I thought I would get back from work and then (I work there until 4 o'clock) I would get back, and then I would be more free and I would be able to do the work [reading and exercises for the program] there, but I had to work the shifts there until 8 o'clock, 9 o'clock, and then when I get back [home] I don't feel like it anymore, and I don't have the time in the morning either, you see how it is... And there are a lot of questions.*" (P6).

1.2 Pandemic Context

Pandemic-related circumstances created multiple, compounding barriers for participant 8 (P8). She described experiencing physical discomfort following COVID-19 vaccinations, which negatively affected her well-being and motivation to continue with the program:

> "*I thought that this program must be a good fit for me, but when I was, well, in a situation of me and the computer [no face-to-face contact] - I just gave up. But, you know, there's also this... Because after one vaccination it wasn't great... it wasn't too bad, I didn't need a doctor or something, but I felt bad for a few days, and after the second vaccination it was even worse... This whole... the problems with the tablet... Well, it all came together so that I capitulated and that was it.*" (P8).

In parallel, technical difficulties with her tablet further hindered participation. Limited digital skills, combined with reluctance to seek in-person assistance due to incomplete vaccination, made resolving these issues challenging:

> "*You know, it was a sum score of many things, I think, that are, well, my negligence, but also a lot of things that are bad. One thing was the vaccinations and everything else. Another thing was that I don't have a*

> *normal computer, I have a tablet. It started running out of space and, and messages were popping up that I need to clear some space, you write two sentences in there and, and again you need to do something, and I need to clear it, I don't know how to do anything myself, I'm taking it to Akropolis [a local shopping mall], I didn't have both my vaccinations, I didn't want to go anywhere with my tablet ...*" (P8).

Theme 2: Personal Factors

Several personal factors contributed to participants' disengagement from the intervention, including perceived irrelevance of program content, competing priorities, negative emotional responses, fatigue, limited technological skills, and unmet expectations regarding face-to-face interaction.

2.1 Program Material Not Relevant

Four participants reported that the program content did not resonate with their personal needs, experiences, or expectations. When the material was perceived as disconnected from their own reality, motivation to engage diminished. As participant 3 (P3) noted:

> *"Yeah, it seemed to me that the questions that were there made them seem kind of irrelevant... And, I don't know, somehow, it was irrelevant to me."* (P3)

2.2 Prioritising Other Activities

Competing priorities also influenced engagement. Some participants preferred to focus on seasonal or recreational activities, such as gardening, which they experienced as more meaningful or enjoyable:

> *"It's summer, I like to go to the garden, work there, do something, but to solve something or... umm... well, kind of learn something or whatever, well... I don't want to, I'm not ready for it now. I just want to focus on other things."* (P6).

Others described becoming distracted by alternative programs or activities that aligned more closely with their interests. Participant 2 (P2) explained, *"Oh, but then there were so many different programs that interested me more, so I didn't really pay much attention."*

2.3 Unpleasant Feelings Caused by the Program

For some participants, engagement with the program evoked negative emotional responses, including frustration and annoyance, which contributed to discontinuation. Participant 1 (P1) described withdrawing after becoming emotionally disengaged:

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> *"I didn't get any benefit from it, because I, I say, stopped participating because I was annoyed and I didn't want to do it anymore. Then there is no benefit."* (P1).

These reactions were often associated with a perceived mismatch between participants' expectations and their experiences of the program.

2.4 Fatigue Caused by the Program

Several participants described the program as mentally demanding or overwhelming. The volume of tasks and repetitive nature of the questions contributed to feelings of exhaustion, making sustained engagement difficult:

> *"Well, maybe there were too many questions right from the start. Somehow, they just kept coming – one, then another, then a third, and then it just kept going and going... somehow, it's just exhausting."* (P6).

2.5 Lack of Technology Skills

Technological challenges were commonly reported, particularly difficulties with logging in and managing devices. Four participants experienced problems accessing the platform. Participant 4 (P4) described repeated unsuccessful login attempts:

> "*The details were there, the numbers were there and the password was there. I did everything, entered everything and I couldn't log in. ... Well, I don't know why it didn't work, you can decide for yourself, but I didn't log in. I logged in once and that was it."* (P4).

Device-related difficulties were also highlighted, especially by participant 8 (P8), who experienced persistent problems with her tablet and emphasised the need for greater technological support:

> *"... a young person couldn't even understand what I'm saying here now. They would say it's nonsense - you press one button and it's all clear. What if I don't know which button to press? So where is the age in all of this? It's not the age itself, but the interaction between age and modern ways of communicating..."* (P8).

2.6 Need for Live Connection

Five participants expressed disappointment regarding the lack of in-person interaction. They reported expecting practical guidance, examples, or structured sessions delivered face-to-face. P8 described missing live contact with program staff:

> "*Well, I missed some live communication. Although there were supposedly telephones - if you want to call, call. But you know, it is one thing*

> *to make a call, but it's another thing if the program itself had, for example, at least every three, let's say, every three topics you've gone through - there is some kind of live communication. Or something else. So that's what I was missing, a live connection with the lecturers or, or the managers, whatever you call them."* (P8).

Similarly, participant 5 (P5) highlighted the importance of human interaction, describing how the absence of direct personal contact influenced their engagement with the program:

> *"Purely remote, just me and the computer—well, I don't like that kind of communication. I need a live person I can interact with."* (P5).

2.7 A Sense of Falling Behind

For some participants, the inability to keep pace with the program created feelings of frustration and inadequacy:

> *"At first, I thought I might catch up, but when I realized I couldn't, I stopped altogether."* (P1).

Others described disengaging after missing several sessions, perceiving continuation as no longer worthwhile:

> *"Oh, and then I thought, well, I've already missed so much, what's the point of filling it in now, and that's how I ended up abandoning it."* (P8).

2.8 Difficult Tasks and Materials

Finally, participants expressed frustration with tasks and materials they found overly challenging. For some, the effort required to focus and complete these tasks was overwhelming, leading to disengagement:

> *"Well, it's just, I, well... I had a hard time answering those questions. And, and, and, and... I couldn't concentrate, I had to think of something... Well, yeah... I didn't feel free."* (P6).

These findings illustrate how multiple aspects of program design collectively influenced participants' capacity to engage with the intervention. Together, these personal factors reduced participants' motivation, emotional readiness, and perceived ability to engage with the intervention.

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Theme 3: Program Related Factors

Another identified theme was program-related factors, encompassing barriers arising from the program itself. These challenges included overly challenging tasks or materials, unsuitable teaching styles, complex logins or questionnaires, and excessive time demands. Each of these issues created obstacles for participants, impacting their ability or willingness to fully engage with the program.

3.1 Time Demands

A prominent barrier for many participants was the perception that the program was too time-consuming. The number of questions and the time required to answer them led to frustration and, in some cases, withdrawal. For some, the constant awareness of the pending task added to their stress:

> *"I didn't want to participate because... I... a lot of questions, it takes a long time to answer and then I think all day that I have to answer today..."* (P4).

3.2 Complex Questionnaires

Closely linked to time demands was the complexity of the questionnaires. Participants reported that the phrasing of the questions, particularly those requiring reflection on emotions over an extended period, felt ambiguous and unhelpful. This uncertainty reduced confidence in their responses and further diminished engagement:

> *"Especially when there are all the questions to be answered, and so for two weeks, what happened, so: did you feel happy? Well, in those two weeks you feel different things - happy and unhappy. Well, the answer is - I can write happy, it will not be specific. I can say unhappy - it will also be unspecific. I don't know, I don't know, it's like that, you know, somehow..."* (P1).

3.3 Login Process

Technical aspects of the program also presented barriers. Some participants found the login process unnecessarily complicated, which they attributed to the need for security protocols. However, this additional complexity discouraged participation, particularly for individuals unfamiliar with such systems:

> *"Well, maybe logging in should be easier. Well, but here you're just protecting all that information, so of course it needs that protection, well. Because there's those personal codes, everything, well."* (P8).

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3.4 Unsuitable Teaching Style

For two participants, the teaching style of the program felt restrictive and reminiscent of a traditional classroom setting. This approach left participants feeling unengaged, as they preferred practical advice or relatable examples rather than tasks that felt like homework:

> *"I felt like a student and that I had to do something there, do something, and so on... Umm... I like it more... Well, maybe listening to, like, some advice, stories from... Examples of things that, well, help people if something goes wrong. And anyway, well, I say, I feel like... Well, like a schoolgirl who had to do her homework."* (P2).

Theme 4: Beliefs About the Program

Participants' beliefs significantly shaped their engagement. Key barriers included perceptions that the program was for younger individuals, challenges in catching up on missed material, doubts about its relevance to their mental health, and dissatisfaction with the lack of face-to-face interaction.

4.1 Belief That the Program Is Targeted at Younger People

Some participants perceived the program as designed for younger individuals, attributing this belief to their own perceived lack of technical skills and discomfort with digital tools:

> *"This is not for me anymore. It's for younger people, maybe those who think faster."* (P3).

P8 similarly attributed her disengagement to limited digital skills and physical strain, describing a sense of not belonging in a technologically oriented environment:

> *"I use Google and email, but that's it. Sometimes I can't even manage Messenger... It's about a lack of technical knowledge. My eyes get tired, and this style seems tailored for younger people, not me. I blame myself for entering a space where I don't belong anymore."* (P8).

4.2 Perception That the Program Is for More Severe Cases

Several participants questioned the relevance of the program to their own circumstances, perceiving their mental health concerns as insufficiently severe to justify participation: *"I read the questions and thought, everything's fine with me. I don't have depression."* (P1).

Similarly, participant 7 (P7) expressed feeling well enough not to require psychological support: *"I realized my situation wasn't bad enough to need psychological help. I feel well enough not to need special assistance."* (P7)

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Overall, these beliefs shaped participants' sense of whether the program was appropriate for them, influencing how they understood its relevance and purpose.

Discussion

This study explored why older adults dropped out of an internet-based cognitive behavioural intervention for depression. Four types of themes were identified: environmental, personal, program-related, and belief-based. Importantly, these barriers rarely acted alone but they tended to build on each other, making dropout more likely when several factors combined.

Most of the findings in this study align with previous research on dropout risks in internet programs for depression (Christensen et al., 2009; Beatty & Binnion, 2016; Lawler et al., 2021; Moshe et al., 2022; Schmidt et al., 2019), including lack of time, external life stressors, technical difficulties, the need for live connection, dissatisfaction with program content, and the burden of participation. However, for older adults with depression, these barriers may have a greater impact due to unique age-related factors, such as reduced technology skills and cognitive and emotional limitations associated with depression (Stanford & Just, 2025).

While technical difficulties in ICBT have been associated with negative effects in general populations (Fenski et al., 2021; Rozental et al., 2015), older adults may experience these barriers with particular intensity due to the limited digital literacy, age-related cognitive and emotional challenges, and depression itself (Stanford & Just, 2025), which can turn minor technical issues into significant sources of frustration and disengagement (Vaportzis et al., 2017). Program design features amplified these technical challenges. Confusing questionnaire phrasing, overly difficult tasks, high volume of questions and a formal presentation style can feel burdensome (Johansson et al., 2015) and lead to frustration or even fatigue. Critically, it is important to recognize that these program-related barriers operated alongside depression symptoms themselves. Participants who met depression screening criteria at baseline experienced symptoms, such as low energy, hopelessness, and negative thoughts, which directly affected their motivation and ability to engage. This underscores the need for clear initial technical guidance and ongoing support to reduce these compounding effects (Schmidt et al., 2019).

The program's rigid weekly structure created another problem - participants who missed sessions struggled to catch up and often gave up. Research has shown that engagement depends on maintaining momentum with scheduled tasks and participants who take longer to complete early modules are at higher risk of dropout (Moshe et al., 2022). When participants fall behind, the accumulation of missed modules can become overwhelming and lead to discontinuation (Christensen et al., 2009). While flexibility in pacing might seem beneficial, evidence suggests that intervention breaks themselves are associated with increased dropout risk (Simon et al., 2025). Instead, alternative design

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features such as catch-up modules, automated progress tracking or proactive therapist check-ins could help participants navigate missed sessions without abandoning the intervention entirely.

Beyond these technical and structural barriers, the program's cognitive and emotional demands also contributed to disengagement. Program design features combined with depression symptoms may lead to fatigue and negative emotions that discouraged continued engagement. These barriers are as well found in studies of drop out (Beatty & Binnion, 2016; Nomeikaite et al., 2023). While negative emotional reactions are normal and distinct from lasting symptom worsening, they may still discourage continued engagement (Nomeikaite et al., 2023). These emotional reactions align with known negative effects in ICBT (Rozental et al., 2015) and participants with depression symptoms facing these challenges are more likely to discontinue treatment (Fenski et al., 2021). Even though normalising such emotions and providing guidance on dealing with them is a common strategy when a participant expresses them, some participants do not share them during treatment. Therefore, proactively emphasizing that these reactions are common and normal, might contribute to better engagement.

Program-participant mismatch emerged as another significant barrier, a common barrier to sustained engagement in ICBT (Alfonsson et al., 2016; Beatty & Binnion, 2016; Nomeikaite et al., 2023). This took multiple forms. Some participants perceived the program content as irrelevant to their lives, as well as prioritized other activities instead, which is documented in older adults (Gould et al., 2024). Additionally, several felt it was better suited for younger, more digitally confident individuals. Others felt their difficulties were not serious enough to justify taking part. These beliefs shaped how participants understood the program's purpose and whether they felt it was relevant to them. When participants do not see the program as fitting their circumstances or other commitments, they may try less to make time for it. Making the program more personal could help. While the intervention had some tailoring, it was limited to therapist selection from existing modules. In face-to-face psychotherapy research, it has been found that taking participants' therapy preferences into account is associated with better therapeutic outcomes and a lower risk of participant dropout (Swift et al., 2018). As well as clearer communication about the program's intended audience, and the types of difficulties it addresses, could help reduce early dropout (Johansson et al., 2015; Nicholas et al., 2010).

A strong and recurring finding was the need for human contact and live interaction, a common theme in ICBT dropout studies (Alfonsson et al., 2016; Johansson et al., 2015; Nomeikaite et al., 2023). While Linardon and others (2026) found that ICBT and face-to-face CBT do not significantly differ in dropout rates, our findings suggest that older adults may distinguish between delayed written support, like scheduled messages and responses to enquiries and real-time live interactions such as video calls or chat. Furthermore, some evidence shows that therapist-guided ICBT works better than ungui-

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ded versions (Titov et al., 2016). Our findings suggest that for older adults, how the support is provided matters. Especially for older adults face-to-face communication may be particularly important for familiarity and reassurance. Moreover, in internet-delivered interventions, more explicit description of the way therapist support will be provided could be provided so that participants could form realistic expectations. For example, whether support is limited to written feedback or includes video calls.

Lastly, environmental barriers were less frequently reported. However, they revealed a key insight: even motivated participants disengaged when life circumstances changed. This may be crucial for older adults when faced with external problems, they often lack accessible support, whether technical or social (Marler & Hargittai, 2024). These findings demonstrate that continued support from the therapists of the intervention might be needed to help plan addressing unexpected life changes and finding ways to allocate time for participating in the intervention.

Overall, these findings suggest that dropout among older adults in internet-based interventions is rarely due to a single cause. Environmental disruptions, personal preferences, program design, and participants' beliefs about whether the program is right for them can all play a role and often reinforce each other. Since some of the barriers reported by participants were related to the stigma surrounding older adults' lag behind the latest technological advancements, interventions that offer more flexibility, clearer expectations, human contact, and accessible technical support may help retain more participants from this age group.

Conclusions

The results of this study demonstrated that personal, environment-related, program and attitude-related factors were the ones that participants named as reasons for dropping out of the treatment. The results of our study add to the growing body of knowledge on reasons for treatment dropout from internet-delivered interventions (Nomeikaite et al., 2023). Our findings show the need to better align programs with participants' expectations and preferences. Adjustments like more flexible schedules, age-inclusive design, and optional face-to-face interaction could improve engagement. By addressing these concerns, programs may become more effective and accessible for diverse users. Future studies could build on our findings and test the impact of the factors involved in the treatment dropout in a quantitative study. These results should also be replicated in studies with different treatment groups in terms of age but also mental health problems.

Limitations

The main limitation of this study is the small number of participants. Four drop-outs from the intervention group could not be interviewed during the study. This could have introduced selection bias, as the experiences of individuals who agreed to participate

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could not be representative of those who chose not to take part. In other circumstances, with more time, it would have been possible to widen the sample by interviewing dropouts from the control group who, at the moment of these interviews, were using the intervention and dropped out only after. On the one hand, a larger number of participants might have allowed more themes to emerge in the data, giving a more accurate picture of the reasons for dropping out of the intervention. On the other hand, we managed to reach more than two-thirds of dropouts which, given the fact that dropouts are generally hard to reach, is an encouraging achievement. Also, because of the sample of older adults with symptoms of depression generalizing these findings to younger individuals and participating in internet-delivered interventions for other psychological problems is limited and should be investigated further. Moreover, these interviews were not anonymous and, therefore, the participants could have presented more socially desirable answers to the interviewer's questions. Even if the interviewer was not a therapist in the program, he was part of the research team and could have been perceived as one. Finally, some data that we gathered could be interpreted ambiguously and therefore, interview protocols should be adjusted to better capture nuances of participants' experience.

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Ethics Statement: The study was approved by the local Research Ethics Committee (email: tyrimu.etika@fsf.vu.lt), Approval Number: 2021-01-22 Nr. 57. Informed consent to participate was obtained from all participants.

Preregistration: No preregistration exists for this study.

Reporting Guidelines: This study was reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong et al., 2007).

Social Media Accounts: *Jonas Eimontas:* LinkedIn

Data Availability: The interview data generated and analyzed during the current study are not publicly available due to the sensitive nature of the personal information disclosed.

Supplementary Materials

The Supplementary Materials contain the COREQ checklist (see Getautas et al., 2026S).

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Index of Supplementary Materials

Getautas, T., Lapinskaitė-Vvohlfahrt, E., Andersson, G., & Eimontas, J. (2026S). *Supplementary materials to "Reasons for discontinuing internet-delivered cognitive behavioral therapy-based treatment for older adults with depression: Findings from a qualitative study"* [COREQ checklist]. PsychOpen GOLD. https://doi.org/10.23668/psycharchives.22763

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